2014 ANNUAL GROUNDWATER REPORT
HORTON #1E
Meter Code: 93388
T31N, 09W, Sec 28, Unit H

SITE DETAILS

Site Location: Latitude: 36.871490 N, Longitude: -107.779800 W
Land Type: Private/Fee
Operator: BP America Production Company

SITE BACKGROUND

- **Site Assessment:** 8/94
- **Excavations:** 10/94 (60 cy)
- **Re-Excavation:** 8/97 (180 cy)

Horton #1E (Site) is being managed pursuant to the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered during Pit Closure Activities" (Remediation Plan, El Paso Natural Gas Company / El Paso Field Services Company, 1995). This Remediation Plan was conditionally approved by the New Mexico Oil Conservation Division (OCD) in correspondence dated November 30, 1995; and the OCD approval conditions were adopted into El Paso CGP Company, LLC's (EPCGP's) program methods. Currently, the Site is operated by BP America Production Company and is active.

The Site is located on Private/Fee land. Various site investigations have occurred from 1995 through 2014. Monitoring wells were installed in 1995 (MW-1), 1999 (MW-2 through MW-3), and 2014 (MW-4 through MW-7). Currently, groundwater sampling is conducted on a semi-annual basis.

SUMMARY OF 2013/2014 ACTIVITIES

In July 2013, a site survey was completed to re-develop a base site map and validate the elevation and location of monitoring wells MW-1, MW-2, and MW-3.

On July18, 2014, new monitoring well locations were staked and surveyed for permitting and utility locating purposes.

Four new wells (MW-4, MW-5, MW-6, and MW-7) were drilled in August 2014, to further assess the extent of the dissolved-phase hydrocarbons and to define the groundwater gradient at the Site. Ground surface and casing elevations of all new monitoring wells were again surveyed, by a licensed surveyor using state plane coordinates.

Monitoring wells were constructed of 2-inch-diameter, schedule 40 polyvinyl chloride (PVC), with .010-inch, continuous, factory-slotted PVC screen. The well screen was installed from 40 feet below ground surface (bgs) to 60 feet bgs and bisects the observed water table located at depths ranging from 47-53 feet below the top of the monitoring well casings during 2014 gauging events. A 3-foot seal of bentonite chips was placed above the sandpack and hydrated, and the remaining annular space filled with bentonite grout. The wells were completed as stick-up wells with locking protective casings and a concrete surface completion. Four protective bollards were installed around each new monitoring

well. Borehole logs and well construction diagrams are provided in Appendix A. Monitoring well MW-4 was installed downgradient from the former pit. Wells MW-5 and MW-7 were installed cross-gradient from MW-1, west and east of the former pit. Monitoring well MW-6 was installed upgradient, south of the existing MW-1. Pertinent site features and soil boring/monitoring well locations are shown on maps included in Figures 1 through 4.

During the drilling of the Site soil borings completed in August 2014, the soil sample interval exhibiting the highest photoionization detector reading was collected and placed in a 4-ounce jar for laboratory analysis. Soil samples were to be analyzed for the presence of benzene, toluene, ethylbenzene, and total xylenes (BTEX) according to United States Environmental Protection Agency (EPA) Method SW846 8021B, total petroleum hydrocarbons using EPA Method 418.1, and chlorides according to EPA Method 300. Sample jars were stored in an ice-filled cooler and shipped under standard chain-of-custody to TestAmerica Laboratories, Inc. in Corpus Christi, Texas. The soil sample analytical report is provided in Appendix B.

Monitoring well development was performed using a well swab and stainless steel bailer until all sediment was removed and visibly clear groundwater was observed. Purged groundwater was containerized and taken to Basin Disposal, Inc. Soil drums were staged on site. On November 15, 2014, Sierra Oilfield Services, Inc. removed nine drums of soil cuttings from the Site and delivered them to Envirotech, Inc.

On April 2, 2014, groundwater levels were gauged at MW-1, MW-2, and MW-3 and groundwater samples were collected using HydraSleeve™ (HydraSleeve) no-purge passive groundwater sampling devices. The HydraSleeves were set during the previous drilling event approximately 0.5 foot above termination depth of the monitoring wells using a suspension tether and stainless steel weights to collect a sample from the screened interval.

On October 22, 2014, MW-1 through MW-3 and the new monitoring wells MW-4, MW-5, MW-6, and MW-7 were gauged and samples were collected from MW-1 through MW-7. Groundwater samples were placed into laboratory-supplied sample containers, packed on ice, and shipped under standard chain-of-custody protocols to TestAmerica Laboratories, Inc. (TestAmerica) in Corpus Christi, Texas where they were analyzed for BTEX. Additional field parameters were collected including dissolved oxygen, temperature, conductivity, pH, and oxidation-reduction potential (ORP) using a YSI multi-parameter instrument. The water remaining in the HydraSleeves was combined in a waste container and taken to Basin Disposal, Inc. for disposal.

SUMMARY TABLES

The soil sample intervals are provided in Table 1. Historic analytical and water level data are summarized in Table 2.

SITE MAPS

Groundwater analytical results and groundwater elevation contour maps from the 2014 quarterly sampling events are depicted on Figures 1 through 4.

ANALYTICAL LAB REPORTS

The soil and groundwater analytical lab reports are included as Appendices B and C, respectively.

RESULTS

- Based on 2014 water level gauging events, the groundwater flow direction is generally to the northeast at the Site (Figures 2 and 4).

- Concentrations of BTEX at MW-1 were either non-detect or reported below the quantitative limit (J-flagged) for both 2014 sampling events.

- Concentrations of BTEX at MW-2 were either below the New Mexico Water Quality Control Commission (NMWQCC) standards or non-detect for both 2014 sampling events.

- BTEX constituents were not detected in groundwater samples collected from MW-3 for both 2014 sampling events.

- BTEX constituents were not detected in groundwater samples collected from MW-4 during the October 2014 sampling event.

- BTEX constituents were not detected in groundwater samples collected from MW-5 during the October 2014 sampling event.

- BTEX constituents were not detected in groundwater samples collected from MW-6 during the October 2014 sampling event.

- BTEX constituents were not detected in groundwater samples collected from MW-7 during the October 2014 sampling event.

- Soil samples were collected from the borings for monitoring wells MW-4 through MW-7. Samples were delayed during shipping and were received over temperature. Samples were not analyzed and discarded by TestAmerica.

- Soil samples were collected from the borings for monitoring wells MW-4 through MW-7. Sample locations were based on elevated soil screening results. For BTEX concentrations, all sample results were either non-detect or below the reporting limit (J-flagged). Total petroleum hydrocarbons were non-detect. Chloride ranged from 3.5 milligrams per kilogram (mg/kg) (MW- 4 J-flagged value) to 4.77 mg/kg (MW-5).

- Based on the results of groundwater analyses from the wells installed in 2014, comprehensive coverage of the potential area where dissolved hydrocarbon concentrations could exist from the former pit release has been achieved. It does not appear that additional delineation of dissolved hydrocarbons is necessary at this time.

PLANNED FUTURE ACTIVITIES

Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 will be gauged and sampled on a quarterly basis in 2015. After four consecutive quarters with no dissolved hydrocarbon concentrations observed, EPCGP will request site closure from the OCD.

TABLES

TABLE 1 - SOIL ANALYTICAL RESULTS

Horton #1E											
Location	**Date**	**Benzene (mg/Kg)**		**Toluene (mg/kg)**		**Ethylbenzene (mg/Kg)**	**Total Xylenes (mg/Kg)**	**BTEX Total (mg/Kg)**	**TPH (mg/Kg)**	**Chloride (mg/Kg)**	
NMWQCC Standards[1]:		10		NA		NA	NA	50	100	600	
MW-4 (48-50')	08/20/14	0.00961	J	0.0089	J	<0.00642	<0.0193	0.01851	<20	3.5	J, B
MW-5 (47-49")	08/20/14	0.0105	J	0.0133	J	<0.00642	<0.0193	0.0238	<20	4.77	B
MW-6 (45-47')	08/21/14	<0.00347		0.0125	J	<0.00642	<0.0193	0.0125	<20	4.64	B
MW-7 (47-49')	08/21/14	<0.00347		0.0126	J	<0.00642	<0.0193	0.0126	<20	4.12	B

Notes:
"J" = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
"H" = Sample was prepped or analyzed beyond the specified holding time.
"<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit).
"NA" = Not analyzed. Samples were received out of temperature.
"[1]" = 2013 Pit Rule Table I standards for soils beneith pits - Groundwater less than or equel to 50 feet

TABLE 2 - GROUNDWATER ANALYTICAL RESULTS

HORTON #1E

Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-1	8/7/1995	308	483	16.9	190	48.99	-	-
MW-1	12/17/1996	86.8	55.5	1	6.66	48.96	-	-
MW-1	3/10/1997	93.3	55.3	1.02	6.34	48.93	-	-
MW-1	6/2/1997	96.1	58.8	1.07	6.82	48.94	-	-
MW-1	9/8/1997	132	80.7	1.59	9.46	48.88	-	-
MW-1	12/10/1997	74.9	47.1	1	5.94	48.76	-	-
MW-1	3/23/1998	63.6	35.9	1	6.93	48.78	-	-
MW-1	6/4/1998	68.1	30.6	1	6.6	48.76	-	-
MW-1	9/14/1998	67.7	19.4	1	3.26	48.85	-	-
MW-1	12/17/1998	100	29	1.1	5.8	48.87	-	-
MW-1	3/23/1999	70.1	30.6	1	3	48.88	-	-
MW-1	6/11/1999	71	19	0.8	2.6	48.92	-	-
MW-1	9/2/1999	120	30	1.8	5.8	48.91	-	-
MW-1	12/9/1999	50	9.1	0.5	1.8	48.89	-	-
MW-1	4/12/2000	67	16	3.6	7.2	48.77	-	-
MW-1	6/9/2000	110	37	1.1	7.4	48.75	-	-
MW-1	9/8/2000	140	18	0.8	7.6	48.81	-	-
MW-1	12/11/2000	93	7.2	0.6	5.3	48.75	-	-
MW-1	3/13/2001	130	3.8	0.7	6.6	48.81	-	-
MW-1	9/7/2001	80	43	1.3	11	48.83	-	-
MW-1	3/20/2002	60	30	0.6	4.9	49.07	-	-
MW-1	9/10/2002	167	49.9	2.4	12.7	49.96	-	-
MW-1	3/14/2003	100	25.5	0.5	6.1	49.00	-	-
MW-1	9/16/2003	95.5	95.8	1.3	12.5	49.18	-	-
MW-1	10/10/2003					49.10	-	-
MW-1	3/23/2004	27.8	6.1	0.029	1.2	49.01	-	-
MW-1	9/22/2004	12.8	4.5	0.5	1	49.12	-	-
MW-1	3/23/2005	22.8	3.7	1	1.4	49.12	-	-
MW-1	6/23/2005	30.6	4.4	1	1.8	49.18	-	-
MW-1	9/20/2005	12.8	0.47	1	2	49.24	-	-
MW-1	12/14/2005	8.8	2.4	1	0.74	49.14	-	-
MW-1	3/27/2006	12.5	2.7	1	0.82	49.17	-	-
MW-1	6/7/2006	5.6	1.3	1	2	49.21	-	-
MW-1	9/25/2006	6.5	1	1	2	49.28	-	-
MW-1	12/27/2006	4.3	2.9	1	0.39	49.19	-	-
MW-1	3/28/2007	11.9	11.3	1	1.5	49.20	-	-
MW-1	6/18/2007	12.6	12.5	1	2	49.23	-	-
MW-1	9/17/2007	2.5	1	1	2	49.27	-	-
MW-1	12/17/2007	14.2	7.6	2	1.1	49.27	-	-
MW-1	3/11/2008	14.7	15.5	0.46	2.2	49.17	-	-
MW-1	6/17/2008	16.2	10.3	1	0.99	48.75	-	-
MW-1	9/10/2008	11.6	1	1	3	48.78	-	-
MW-1	12/2/2008	3.7	1.8	1	2	48.85	-	-
MW-1	3/3/2009	2.7	1.9	1	2	48.92	-	-
MW-1	6/2/2009	3.6	1.4	1	2	48.96	-	-
MW-1	9/16/2009	0.44	1	1	2	49.03	-	-
MW-1	4/2/2014	<0.20	1.0 J	<0.20	1.5 J	50.82	-	-
MW-1	10/23/2014	<0.38	<0.70	<0.50	<1.6	49.83	-	-

TABLE 2 - GROUNDWATER ANALYTICAL RESULTS

HORTON #1E

Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-2	10/20/1999	0.5	0.5	0.5	0.5	43.95	-	-
MW-2	10/9/2000	0.5	0.7	0.5	1.1	46.41	-	-
MW-2	3/13/2001	0.5	0.5	0.5	0.5	46.47	-	-
MW-2	9/7/2001					46.59	-	-
MW-2	3/20/2002	0.5	0.5	0.5	1	46.75	-	-
MW-2	9/10/2002					46.76	-	-
MW-2	9/16/2003					46.86	-	-
MW-2	3/23/2004					46.67	-	-
MW-2	9/22/2004					46.80	-	-
MW-2	3/23/2005					46.81	-	-
MW-2	6/23/2005					46.88	-	-
MW-2	9/20/2005					46.94	-	-
MW-2	12/14/2005					46.85	-	-
MW-2	3/27/2006					46.86	-	-
MW-2	6/7/2006					46.90	-	-
MW-2	9/25/2006					46.98	-	-
MW-2	12/27/2006					46.88	-	-
MW-2	3/31/2007	1	1	1	2	46.89	-	-
MW-2	6/18/2007					46.00	-	-
MW-2	9/17/2007					46.98	-	-
MW-2	12/17/2007					47.04	-	-
MW-2	3/11/2008					46.92	-	-
MW-2	6/17/2008					46.37	-	-
MW-2	9/10/2008					46.51	-	-
MW-2	12/2/2008					46.47	-	-
MW-2	3/3/2009					46.56	-	-
MW-2	6/2/2009					46.71	-	-
MW-2	9/16/2009	1	1	1	2	46.78	-	-
MW-2	4/2/2014	4.6	13	<0.20	2.9	49.57	-	-
MW-2	10/23/2014	<0.38	<0.70	<0.50	<1.6	47.53	-	-

TABLE 2 - GROUNDWATER ANALYTICAL RESULTS

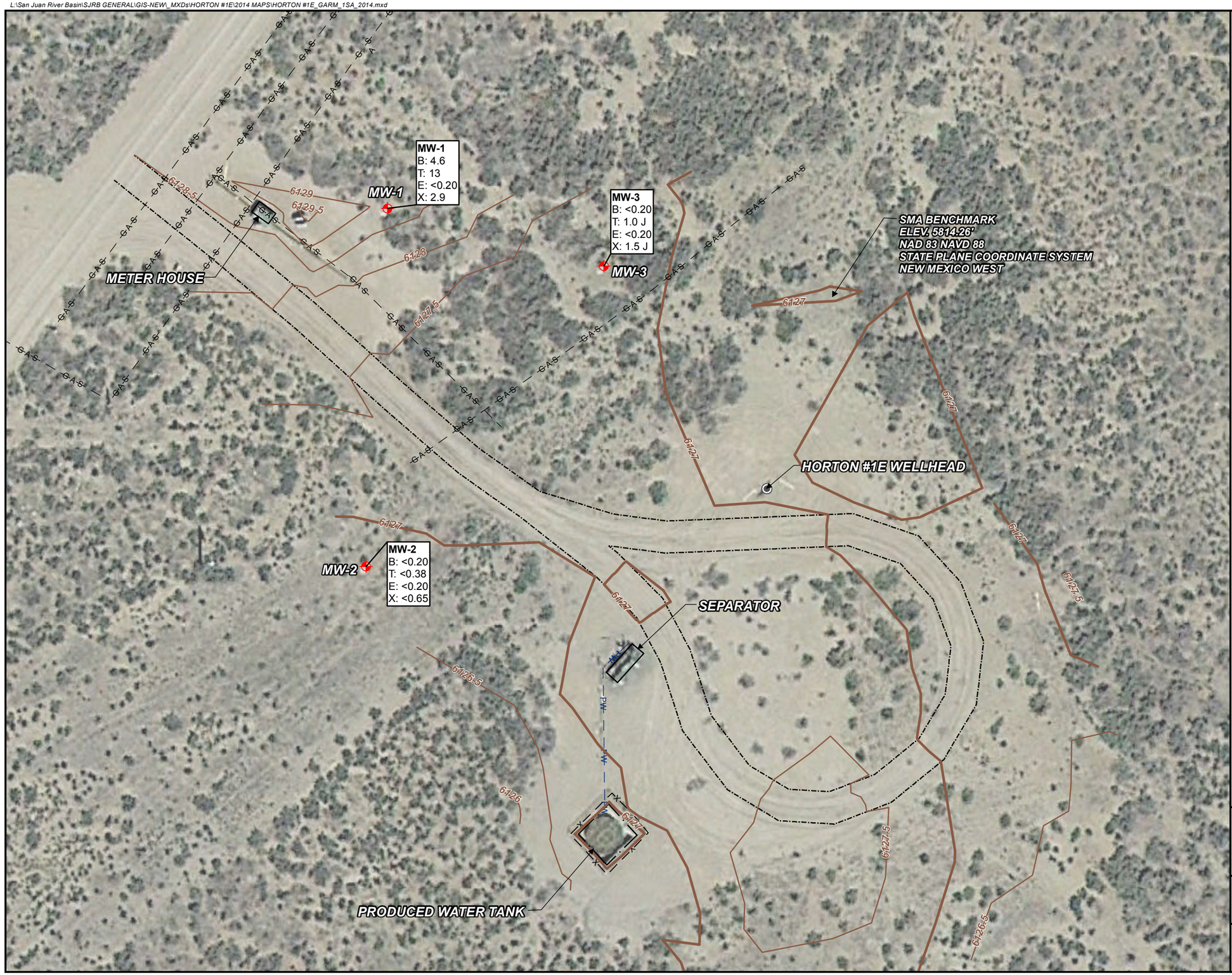
HORTON #1E

Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-3	10/20/1999	0.5	0.5	0.5	0.8	47.65	-	-
MW-3	10/10/2000	0.5	1	0.5	2	50.12	-	-
MW-3	3/13/2001	0.5	0.5	0.5	0.5	50.18	-	-
MW-3	9/7/2001					50.18	-	-
MW-3	3/20/2002	0.5	0.5	0.5	1	50.40	-	-
MW-3	9/10/2002					50.38	-	-
MW-3	9/16/2003					50.45	-	-
MW-3	3/23/2004					50.40	-	-
MW-3	9/22/2004					50.46	-	-
MW-3	3/23/2005					50.46	-	-
MW-3	6/23/2005					50.51	-	-
MW-3	9/20/2005					50.57	-	-
MW-3	12/14/2005					50.52	-	-
MW-3	3/27/2006					50.52	-	-
MW-3	6/7/2006					50.54	-	-
MW-3	9/25/2006					50.61	-	-
MW-3	12/27/2006					50.51	-	-
MW-3	3/31/2007	1	1	1	2	50.52	-	-
MW-3	6/18/2007					50.56	-	-
MW-3	9/17/2007					50.60	-	-
MW-3	12/17/2007					50.60	-	-
MW-3	3/11/2008					50.55	-	-
MW-3	6/17/2008					50.29	-	-
MW-3	9/10/2008					50.25	-	-
MW-3	12/2/2008					50.25	-	-
MW-3	3/3/2009					50.30	-	-
MW-3	6/2/2009					50.33	-	-
MW-3	9/16/2009	1	1	1	2	50.42	-	-
MW-3	4/2/2014	<0.20	<0.38	<0.20	<0.65	47.34	-	-
MW-3	10/23/2014	<0.38	<0.70	<0.50	<1.6	50.92	-	-
MW-4	10/23/2014	<0.38	<0.70	<0.50	<1.6	53.22	-	-
MW-5	10/23/2014	<0.38	<0.70	<0.50	<1.6	50.45	-	-
MW-6	10/23/2014	<0.38	<0.70	<0.50	<1.6	48.98	-	-
MW-7	10/23/2014	<0.38	<0.70	<0.50	<1.6	50.44	-	-

Notes:
Results highlighted yellow exceed their respective New Mexico Water Quality Control Comission standards.
"J" = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
"<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit).

FIGURES

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\HORTON #1E\2014 MAPS\HORTON #1E_GARM_1SA_2014.mxd



LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6080.5 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- PW — PRODUCED WATER LINE
- MONITORING WELL
- SMA BENCHMARK
- RIG ANCHOR

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
NS = NOT SAMPLED
µg/L = MICROGRAMS PER LITER
<0.30 = BELOW METHOD DETECTION LIMIT
J = RESULT IS LESS THAN THE RL, BUT GREATER THAN OR EQUAL TO THE MDL AND THE CONCENTRATION IS AN APPROXIMATE VALUE.
MDL = METHOD DETECTION LIMIT
RL = REPORTING LIMIT OR REQUESTED LIMIT (RADIOCHEMISTRY)

ANALYTE	NMWQCC STANDARDS
B = Benzene	10 µg/L
T = Toluene	750 µg/L
E = Ethylbenzene	750 µg/L
X = Total Xylenes	620 µg/L

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/9/2015	CCL	CCL	DCW

TITLE:

HORTON #1E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED APRIL 2, 2014

PROJECT: ***SAN JUAN RIVER BASIN***
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\HORTON #1E\2014 MAPS\HORTON #1E_GECM_1SA_2014.mxd

MW-1
6081.52

MW-3
6078.64

MW-2
6081.96

METER HOUSE

SMA BENCHMARK
ELEV. 5814.26'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

HORTON #1E WELLHEAD

SEPARATOR

PRODUCED WATER TANK

6128.5
6129
6129.5
6128
6127.5
6127
6079
6079.5
6080
6080.5
6081
6081.5
6082
6126.5
6126
6127.5
6126.5

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
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- PW — PRODUCED WATER LINE
- MONITORING WELL
- SMA BENCHMARK
- RIG ANCHOR

NOTES:

5318.24 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL

5317 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.5 FOOT CONTOUR INTERVAL)

DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/8/2015	CCL	CCL	DAW

TITLE:
HORTON #1E
GROUNDWATER ELEVATION MAP
GAUGED APRIL 2, 2014

PROJECT:
SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 2

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\HORTON #1E\2014 MAPS\HORTON #1E_GARM_2SA_2014.mxd

MW-7
B: <0.38
T: <0.70
E: <0.50
X: <1.6

MW-4
B: <0.38
T: <0.70
E: <0.50
X: <1.6

MW-1
B: <0.38
T: <0.70
E: <0.50
X: <1.6

MW-5
B: <0.38
T: <0.70
E: <0.50
X: <1.6

MW-3
B: <0.38
T: <0.70
E: <0.50
X: <1.6

MW-6
B: <0.38
T: <0.70
E: <0.50
X: <1.6

MW-2
B: <0.38
T: <0.70
E: <0.50
X: <1.6

MW-4
MW-7
MW-1
MW-5
MW-3
MW-6
MW-2

6128.5
6129
6129.5
6128
6127.5
6127
6126.5
6126

METER HOUSE
EXISTING ROAD
CONOCO PHILLIPS GAS LINE
SMA BENCHMARK
ELEV. 5814.26'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST
HORTON #1E WELLHEAD
SEPARATOR
PRODUCED WATER TANK

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6080.5 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- PW — PRODUCED WATER LINE
- MONITORING WELL
- SMA BENCHMARK
- RIG ANCHOR

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

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MDL = METHOD DETECTION LIMIT
RL = REPORTING LIMIT OR REQUESTED LIMIT (RADIOCHEMISTRY)

ANALYTE	NMWQCC STANDARDS
B = Benzene	10 µg/L
T = Toluene	750 µg/L
E = Ethylbenzene	750 µg/L
X = Total Xylenes	620 µg/L

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/9/2015	CCL	CCL	DCW

TITLE:
HORTON #1E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED OCTOBER 23, 2014

PROJECT:
SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\HORTON #1E\2014 MAPS\HORTON #1E_GECM_2SA_2014.mxd

MW-4
6078.88
MW-4

MW-7
6081.55
MW-7

MW-1
6081.26
MW-1

MW-5
6079.76
MW-5

MW-3
6078.54
MW-3

MW-6
6081.40
MW-6

MW-2
6081.77
MW-2

METER HOUSE

EXISTING ROAD

CONOCO PHILLIPS
GAS LINE

SMA BENCHMARK
ELEV. 5814.26'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

HORTON #1E WELLHEAD

SEPARATOR

PRODUCED WATER TANK

6128.5
6129
6129.5
6127.5
6078.5
6079
6079.5
6080
6080.5
6081
6081.5
6127
6127.5
6126.5
6126

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6080.5 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- PW — PRODUCED WATER LINE
- MONITORING WELL
- SMA BENCHMARK
- RIG ANCHOR

NOTES:

5318.24 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL

5317 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.5 FOOT CONTOUR INTERVAL)

DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/9/2015	CCL	CCL	DCW

TITLE:
HORTON #1E
GROUNDWATER ELEVATION MAP
GAUGED OCTOBER 23, 2014

PROJECT:
SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 4

APPENDICES

APPENDIX A – BOREHOLE AND WELL CONSTRUCTION LOGS

APPENDIX B – SOIL SAMPLING ANALYTICAL REPORTS

APPENDIX C – APRIL 2, 2014 GROUNDWATER SAMPLING ANALYTICAL REPORT
OCTOBER 23, 2014 GROUNDWATER SAMPLING ANALYTICAL REPORT

APPENDIX A

Drilling Log

MWH

FINAL

Monitoring Well **MW-4**

Project *Horton #1E* Owner *EPCGPC*

Location *San Juan County, New Mexico* Project Number *10504833.010501*

Surface Elev. *6129.23 ft* North *2136672.598* East *2738656.434*

Top of Casing *6132.10 ft* Water Level Initial ▽ *6082.1* 08/19/14 00:00 Static ▼

Hole Depth *61.0ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *42.5 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *Hollow-Stem Auger* Sand Pack *10-20*

Driller *Matt Cain/Bryan Nydoske* Driller Reg. # *WD-1210* Log By *Brad Barton*

Start Date *8/19/2014* Completion Date *8/20/2014* Checked By *Chris Hiatt*

COMMENTS
Sage brush in well area

Bentonite Grout | Bentonite Granules | Grout | Portland Cement | Sand Pack | Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
0	0					Silt, sandy, yellowish-brown (10YR 5/4), medium stiff, dry, very fine sand, no hydrocarbon odor, top 10' hydro-excavated	
5	0	0%			ML		
10	0				SM	Sand, silty, yellowish-brown, loose, fine grained, dry, no hydrocarbon odor	
	0	52%				No recovery	
15	0				SM	Sand, silty, yellowish-brown, loose, fine grained, dry, no hydrocarbon odor	
	0	80%				No recovery	
20	0				SM	Sand, silty, yellowish-brown, loose, fine grained, dry, no hydrocarbon odor, driller reports hard drilling	
	0	90%			SW	Sand, well-graded, yellowish-brown, dry, fine to medium-grained, weak to moderate cementation, angular to subangular, no hydrocarbon odor, driller reports hard drilling	
25	0				SW	No recovery	
	0	100%				Sand, well-graded, yellowish-brown, dry, fine to medium-grained, weak to moderate cementation, angular to subangular, no hydrocarbon odor	
30	0				CL	Clay with silt, brown, medium stiff to stiff, dry to slightly moist, low plasticity increasing with depth to medium plasticity at 39' and high plasticity at 43.5', no dilatency, no hydrocarbon odor	
	0	100%					
35	0						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-4**

FINAL

Project *Horton #1E* Owner *EPCGPC*

Location *San Juan County, New Mexico* Project Number *10504833.010501*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
35	0	100%			CL		
40	0						
	0	82%					
	0.1					No recovery	
45	0.1					Clay, sandy, tan/brown, at 49.5' color changes to darg greenish-gray (gley2 4/1), moist to very moist, wet at 50', trace gravel up to 1/2" at 50', low to medium plasticity, no dilatency, no hydrocarbon odor	
	0.1	100% MW-4 48-50'			CL		
50	0.1						
	0.1	78%					
	0.1					No recovery	
55	0.1					Sand, well-graded, brown (7.5YR 4/3), greenish-gray (gley2 4/1) at 58.5', loose, wet, fine to medium-grained, weak cementation increasing with depth, angular to subangular, no hydrocarbon odor	
	0.1	100%			SW		
60	0.1	100%					
						Well set at 60' Hole depth = 61'	
65							
70							
75							
80							

MWH

Drilling Log

Monitoring Well **MW-5**

FINAL

Project *Horton #1E* Owner *EPCGPC*

Location *San Juan County, New Mexico* Project Number *10504833.010501*

Surface Elev. *6127.39 ft* North *2136637.859* East *2738684.42*

Top of Casing *6130.21 ft* Water Level Initial ▽ *6081.21* 08/20/14 00:00 Static ▼

Hole Depth *61.0ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *42.5 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *Hollow-Stem Auger* Sand Pack *10-20*

Driller *Matt Cain/Bryan Nydoske* Driller Reg. # *WD-1210* Log By *Brad Barton*

Start Date *8/19/2014* Completion Date *8/20/2014* Checked By *Chris Hiatt*

COMMENTS
Sage brush in well area

Bentonite Grout | Bentonite Granules | Grout | Portland Cement | Sand Pack | Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
0	0						
5	0	0%			ML	Silt, sandy, yellowish-brown, dry, very fine sand, no hydrocarbon odor, top 10' hydro-excavated	
10	0				SM	Sand, silty, yellowish-brown (10YR 5/4), dry, none to weak cementation, no hydrocarbon odor	
	0	44%				No recovery	
15	0				SM	Sand, silty, yellowish-brown (10YR 5/4), dry, none to weak cementation, no hydrocarbon odor	
	0	60%				No recovery	
20	0				SM	Sand, silty, yellowish-brown (10YR 5/4), dry, none to weak cementation, no hydrocarbon odor	
	0	78%				No recovery	
25	0				CL	Clay with silt, brown (10YR 5/3), gley mottling, medium stiff, dry to slightly moist, low plasticity, no dilatency, no hydrocarbon odor	
	0	100%					
30	0						
	0	100%					
35	0						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-5**

FINAL

Project *Horton #1E* Owner *EPCGPC*

Location *San Juan County, New Mexico* Project Number *10504833.010501*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
35	0	100%			CL		
40	0				SW	Sand, well-graded, yellowish-brown (10YR 5/4), loose, dry, increasing moisture with depth, fine to medium-grained, mostly fine-grained with depth, trace clay, angular to subangular, black coloration and iron oxide staining at 43', no hydrocarbon odor	
	0	68%				No recovery	
45 ▽	0				CH	Clay, olive-brown, soft to medium stiff, moist to very moist, high plasticity, no dilatency, no hydrocarbon odor	
	0	76% MW-5 47-49'				No recovery	
50	0				SC	Sand, clayey, brown (7.5YR 4/3), at 52' color changes to dark greenish-gray (gley2 4/1), loose, wet, fine to medium-grained, weak to no cementation, angular to subangular	
	0	78%			SW	Sand, brown, well-graded	
						No recovery	
55	0				SC	Sand, clayey, brown (7.5YR 4/3), loose, wet, medium to coarse-grained, none to weak cementation, angular to subangular	
	0	64%				No recovery	
60	0	10%			SW	Sand, dark greenish-gray, moist to wet, well-graded, strong cementation, no hydrocarbon odor	
						No recovery	
						Well set at 60'	
						Hole depth = 61'	
65							
70							
75							
80							

Drilling Log HORTON #1E.GPJ MWH IA.GDT 11/29/14

MWH

Drilling Log

FINAL

Monitoring Well **MW-6**

Project *Horton #1E* Owner *EPCGPC*

Location *San Juan County, New Mexico* Project Number *10504833.010501*

Surface Elev. *6127.42 ft* North *2136622.047* East *2738655.673*

Top of Casing *6130.38 ft* Water Level Initial ▽ *6083.88* 08/21/14 00:00 Static ▼

Hole Depth *61.0ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *42.5 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *Hollow-Stem Auger* Sand Pack *10-20*

Driller *Matt Cain/Bryan Nydoske* Driller Reg. # *WD-1210* Log By *Brad Barton*

Start Date *8/19/2014* Completion Date *8/20/2014* Checked By *Chris Hiatt*

COMMENTS

Bentonite Grout | Bentonite Granules | Grout | Portland Cement | Sand Pack | Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
0							
0	0					Silt, sandy. yellowish-brown, loose, dry, very fine-grained, no hydrocarbon odor, top 10' hydro-excavated	
5	0	0%			ML		
	0						
10	0				SM	Sand, silty, yellowish-brown (10YR 5/4), loose, dry, fine-grained, weak cementation, no hydrocarbon odor	
	0	52%				No recovery	
15	0				SM	Sand, silty, yellowish-brown (10YR 5/4), loose, dry, fine-grained, weak cementation, no hydrocarbon odor	
	0	68%				No recovery	
20	0				SM	Sand, silty, yellowish-brown (10YR 5/4), loose, dry, fine-grained, cementation increasing with depth, no hydrocarbon odor	
	0	80%				No recovery	
25	0				SM	Sand, silty, yellowish-brown (10YR 5/4), loose, dry, fine-grained, cementation increasing with depth, no hydrocarbon odor	
	0	92%			CL	Clay with silt, brown, medium stiff to stiff, dry, low plasticity, no dilatency, no hydrocarbon odor, gley mottling	
30	0					No recovery	
	0	100%			CL	Clay with silt, brown, soft to medium stiff, dry, plasticity increasing with depth from low to medium, no dilatency, no hydrocarbon odor, gley mottling	
35	0						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-6**

FINAL

Project *Horton #1E* Owner *EPCGPC*

Location *San Juan County, New Mexico* Project Number *10504833.010501*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
35	0	100%			CL		
40	0						
	0	72%					
▽	0					No recovery	
45	0	MW-6 45-47' 78%			CH	Clay with sand lenses, brown to very dark gray (7.5YR 3/1), soft to medium stiff, very moist to wet in sand lenses, trace sand and silt, sand lenses medium-grained, high plasticity clay, no hydrocarbon odor	
	0					No recovery	
50	0	76%			CH	Clay with sand lenses, brown to very dark gray (7.5YR 3/1) changing at 52' to dark gray with black spots, soft to medium stiff, wet, sand lenses medium-grained, sand content increasing with depth, high plasticity clay, no hydrocarbon odor	
	0					No recovery	
55	0	82%			CL	Clay with sand, sand lens from 57' to 57.5', dark gray, soft to medium stiff, moist to wet, fine-grained sand, medium to high plasticity, greenish-gray striations at 59', no hydrocarbon odor	
	0					No recovery	
60	0	100%				Clay with sand, dark gray, soft per driller, moist to wet, fine-grained sand, medium to high plasticity, no hydrocarbon odor	
						Well set at 60'	
						Hole depth = 61'	
65							
70							
75							
80							

Drilling Log

MWH

Monitoring Well **MW-7**

FINAL

Project *Horton #1E* Owner *EPCGPC*

Location *San Juan County, New Mexico* Project Number *10504833.010501*

Surface Elev. *6129.18 ft* North *2136653.685* East *2738619.634*

Top of Casing *6131.99 ft* Water Level Initial ▽ *6082.99* 08/21/14 00:00 Static ▼

Hole Depth *61.0ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *42.5 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *Hollow-Stem Auger* Sand Pack *10-20*

Driller *Matt Cain/Bryan Nydoske* Driller Reg. # *WD-1210* Log By *Brad Barton*

Start Date *8/19/2014* Completion Date *8/20/2014* Checked By *Chris Hiatt*

COMMENTS
Near meter house

Bentonite Grout | Bentonite Granules | Grout | Portland Cement | Sand Pack | Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
0	0					Silt, sandy, yellowish-brown, loose, dry, very fine-grained, no hydrocarbon odor, top 10' hydro-excavated	
5	0	0%			ML		
10	0	74%			SM	Sand, silty, yellowish-brown, loose, dry, fine-grained, no cementation, no hydrocarbon odor	
15	0	72%			SM	No recovery Sand, silty, yellowish-brown, loose, dry, fine-grained, no cementation, no hydrocarbon odor	
20	0	48%			SW	No recovery Sand, well-graded, yellowish-brown, loose, dry, trace gravel up to 1/2", weakly cemented, angular to subangular sand, no hydrocarbon odor	
25	0	94%			SM ML	No recovery Sand, silty, light olive-brown, loose, dry, fine to medium-grained, no cementation, no hydrocarbon odor Silt, clayey, dark brown, soft to medium stiff, dry, none to weak cementation, low plasticity, gley mottling, no hydrocarbon odor	
30	0	100%			CL	No recovery Clay, with silt, brown, soft to medium stiff, dry, low plasticity, no dilatency, gley mottling, no hydrocarbon odor	
35	0						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-7**

FINAL

Project *Horton #1E* Owner *EPCGPC*

Location *San Juan County, New Mexico* Project Number *10504833.010501*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
35	0	100%			CL		
	0						
40	0				CH	Clay with sand lenses, brown, soft to medium stiff, increasing moisture with depth, high plasticity, no dilatency, minor oxide and black staining 43.2' to 44', no hydrocarbon odor	
	0	100%					
45 ▽	0						
	0	84% MW-7 47-49'				No recovery	
50	0				CH	Clay with thin sand lenses, brown, medium stiff, moist to wet, high plasticity, no hydrocarbon odor	
	0	54%				No recovery	
55	0				CH	Clay with thin sand lenses, brown, medium stiff, moist to wet, high plasticity, no hydrocarbon odor	
	0	84%			SW	Sand, well-graded, greenish-gray, loose, slightly moist to wet, strongly cemented, subangular to angular	
60	0	100%			SW	No recovery Sand, well-graded, greenish-gray, loose, slightly moist to wet, strongly cemented, subangular to angular, driller reports hard drilling	
						Set well at 60' Hole depth = 61'	
65							
70							
75							
80							

Drilling Log HORTON #1E.GPJ MWH IA.GDT 11/29/14

APPENDIX B

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

TestAmerica Job ID: 600-97568-1
Client Project/Site: Kinder-Morgan Horton #1E

For:
MWH Americas Inc
11153 Aurora Avenue
Des Moines, Iowa 50322-7904

Attn: Clint Oberbroeckling

Authorized for release by:
9/11/2014 11:38:10 AM

Neal Salcher, Senior Project Manager
neal.salcher@testamericainc.com

Table of Contents

Job ID: 600-97568-1

Laboratory: TestAmerica Houston

Narrative

CASE NARRATIVE

Client: MWH Americas Inc

Project: Kinder-Morgan Horton #1E

Report Number: 600-97568-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

Note: All samples that require thermal preservation are considered acceptable if the arrival temperature is within 2°C of the required temperature or method specified range. For samples with a specified temperature of 4°C, samples with a temperature ranging from just above freezing temperature of water to 6°C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

The samples were received on 08/25/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.3 C.

VOLATILE ORGANIC COMPOUNDS (GC)

Samples MW-4 (48-50) - Horton (600-97568-1), MW-5 (47-49) - Horton (600-97568-2), MW-6 (45-47) - Horton (600-97568-3) and MW-7 (47-49) - Horton (600-97568-4) were analyzed for volatile organic compounds (GC) in accordance with EPA SW-846 Method 8021B. The samples were analyzed on 08/26/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DI LEACH

Samples MW-4 (48-50) - Horton (600-97568-1), MW-5 (47-49) - Horton (600-97568-2), MW-6 (45-47) - Horton (600-97568-3) and MW-7 (47-49) - Horton (600-97568-4) were analyzed for DI Leach in accordance with ATSM Method D3987-85/EPA SW-846 Method 9056A. The samples were leached on 09/04/2014 and analyzed on 09/05/2014.

Chloride was detected in method blank MB 600-143328/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 600-97568-1 (Continued)

Laboratory: TestAmerica Houston (Continued)

Method Summary

Client: MWH Americas Inc
Project/Site: Kinder-Morgan Horton #1E

TestAmerica Job ID: 600-97568-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	TAL HOU
9056	Anions, Ion Chromatography	SW846	TAL HOU
EPA 418.1 TPH	EPA 418.1 Total Petroleum Hydrocarbons	NONE	Hall Env

Protocol References:

NONE = NONE

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

Hall Env = Hall Environmental Analysis Laboratory, 4901 Hawkins NE, Suite D, Albuquerque, NM 87109

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: MWH Americas Inc
Project/Site: Kinder-Morgan Horton #1E

TestAmerica Job ID: 600-97568-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-97568-1	MW-4 (48-50) - Horton	Solid	08/20/14 08:20	08/25/14 09:57
600-97568-2	MW-5 (47-49) - Horton	Solid	08/20/14 12:45	08/25/14 09:57
600-97568-3	MW-6 (45-47) - Horton	Solid	08/21/14 09:10	08/25/14 09:57
600-97568-4	MW-7 (47-49) - Horton	Solid	08/21/14 13:45	08/25/14 09:57

Client Sample ID: MW-4 (48-50) - Horton

Lab Sample ID: 600-97568-1

Date Collected: 08/20/14 08:20

Matrix: Solid

Date Received: 08/25/14 09:57

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00961	J	0.0200	0.00347	mg/Kg		08/26/14 11:43	08/26/14 15:28	20
Toluene	0.00890	J	0.0200	0.00525	mg/Kg		08/26/14 11:43	08/26/14 15:28	20
Ethylbenzene	0.00642	U	0.0200	0.00642	mg/Kg		08/26/14 11:43	08/26/14 15:28	20
Xylenes, Total	0.0193	U	0.0200	0.0193	mg/Kg		08/26/14 11:43	08/26/14 15:28	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*119*		*43 - 141*	*08/26/14 11:43*	*08/26/14 15:28*	*20*
a,a,a-Trifluorotoluene	*104*		*44 - 134*	*08/26/14 11:43*	*08/26/14 15:28*	*20*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.50	J B	3.95	0.0662	mg/Kg			09/05/14 03:37	1

Client Sample ID: MW-5 (47-49) - Horton

Lab Sample ID: 600-97568-2

Date Collected: 08/20/14 12:45

Matrix: Solid

Date Received: 08/25/14 09:57

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0105	J	0.0200	0.00347	mg/Kg		08/26/14 11:43	08/26/14 15:55	20
Toluene	0.0133	J	0.0200	0.00525	mg/Kg		08/26/14 11:43	08/26/14 15:55	20
Ethylbenzene	0.00642	U	0.0200	0.00642	mg/Kg		08/26/14 11:43	08/26/14 15:55	20
Xylenes, Total	0.0193	U	0.0200	0.0193	mg/Kg		08/26/14 11:43	08/26/14 15:55	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*120*		*43 - 141*	*08/26/14 11:43*	*08/26/14 15:55*	*20*
a,a,a-Trifluorotoluene	*106*		*44 - 134*	*08/26/14 11:43*	*08/26/14 15:55*	*20*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.77	B	3.93	0.0658	mg/Kg			09/05/14 04:37	1

Client Sample ID: MW-6 (45-47) - Horton

Lab Sample ID: 600-97568-3

Date Collected: 08/21/14 09:10

Matrix: Solid

Date Received: 08/25/14 09:57

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00347	U	0.0200	0.00347	mg/Kg		08/26/14 11:43	08/26/14 16:16	20
Toluene	0.0125	J	0.0200	0.00525	mg/Kg		08/26/14 11:43	08/26/14 16:16	20
Ethylbenzene	0.00642	U	0.0200	0.00642	mg/Kg		08/26/14 11:43	08/26/14 16:16	20
Xylenes, Total	0.0193	U	0.0200	0.0193	mg/Kg		08/26/14 11:43	08/26/14 16:16	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*123*		*43 - 141*	*08/26/14 11:43*	*08/26/14 16:16*	*20*
a,a,a-Trifluorotoluene	*105*		*44 - 134*	*08/26/14 11:43*	*08/26/14 16:16*	*20*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.65	B	3.97	0.0665	mg/Kg			09/05/14 04:57	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Kinder-Morgan Horton #1E

TestAmerica Job ID: 600-97568-1

Client Sample ID: MW-7 (47-49) - Horton
Date Collected: 08/21/14 13:45
Date Received: 08/25/14 09:57

Lab Sample ID: 600-97568-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00347	U	0.0200	0.00347	mg/Kg		08/26/14 11:43	08/26/14 16:37	20
Toluene	**0.0126**	**J**	0.0200	0.00525	mg/Kg		08/26/14 11:43	08/26/14 16:37	20
Ethylbenzene	0.00642	U	0.0200	0.00642	mg/Kg		08/26/14 11:43	08/26/14 16:37	20
Xylenes, Total	0.0193	U	0.0200	0.0193	mg/Kg		08/26/14 11:43	08/26/14 16:37	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*121*		*43 - 141*	*08/26/14 11:43*	*08/26/14 16:37*	*20*
a,a,a-Trifluorotoluene	*103*		*44 - 134*	*08/26/14 11:43*	*08/26/14 16:37*	*20*

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.12**	**B**	3.96	0.0663	mg/Kg			09/05/14 05:17	1

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Kinder-Morgan Horton #1E

TestAmerica Job ID: 600-97568-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: MWH Americas Inc
Project/Site: Kinder-Morgan Horton #1E

TestAmerica Job ID: 600-97568-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		BFB1	TFT1								
Lab Sample ID	Client Sample ID	(43-141)	(44-134)								
600-97568-1	MW-4 (48-50) - Horton	119	104								
600-97568-2	MW-5 (47-49) - Horton	120	106								
600-97568-3	MW-6 (45-47) - Horton	123	105								
600-97568-4	MW-7 (47-49) - Horton	121	103								
LCS 600-142616/1-A	Lab Control Sample	118	109								
LCSD 600-142616/7-A	Lab Control Sample Dup	115	108								
MB 600-142616/2-A	Method Blank	111	107								

Surrogate Legend

BFB = 4-Bromofluorobenzene

TFT = a,a,a-Trifluorotoluene

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 600-142616/2-A
Matrix: Solid
Analysis Batch: 142495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 142616

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00347	U	0.0200	0.00347	mg/Kg		08/26/14 11:43	08/26/14 14:30	20
Toluene	0.00525	U	0.0200	0.00525	mg/Kg		08/26/14 11:43	08/26/14 14:30	20
Ethylbenzene	0.00642	U	0.0200	0.00642	mg/Kg		08/26/14 11:43	08/26/14 14:30	20
Xylenes, Total	0.0193	U	0.0200	0.0193	mg/Kg		08/26/14 11:43	08/26/14 14:30	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*		*43 - 141*	*08/26/14 11:43*	*08/26/14 14:30*	*20*
a,a,a-Trifluorotoluene	*107*		*44 - 134*	*08/26/14 11:43*	*08/26/14 14:30*	*20*

Lab Sample ID: LCS 600-142616/1-A
Matrix: Solid
Analysis Batch: 142495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 142616

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.401	0.4080		mg/Kg		102	70 - 130
Toluene	0.401	0.4239		mg/Kg		106	70 - 130
Ethylbenzene	0.401	0.4184		mg/Kg		104	70 - 130
Xylenes, Total	1.20	1.335		mg/Kg		111	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*118*		*43 - 141*
a,a,a-Trifluorotoluene	*109*		*44 - 134*

Lab Sample ID: LCSD 600-142616/7-A
Matrix: Solid
Analysis Batch: 142495

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 142616

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.401	0.4109		mg/Kg		102	70 - 130	1	20
Toluene	0.401	0.4104		mg/Kg		102	70 - 130	3	20
Ethylbenzene	0.401	0.4124		mg/Kg		103	70 - 130	1	20
Xylenes, Total	1.20	1.231		mg/Kg		102	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*115*		*43 - 141*
a,a,a-Trifluorotoluene	*108*		*44 - 134*

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 600-143328/1-A
Matrix: Solid
Analysis Batch: 143335

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.6798	J	4.00	0.0670	mg/Kg			09/05/14 02:57	1

Method: 9056 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 600-143328/2-A
Matrix: Solid
Analysis Batch: 143335

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			200	202.1		mg/Kg		101	90 - 110		

Lab Sample ID: 600-97568-1 MS
Matrix: Solid
Analysis Batch: 143335

Client Sample ID: MW-4 (48-50) - Horton
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	3.50	J B	98.8	95.68		mg/Kg		93	80 - 120		

Lab Sample ID: 600-97568-1 MSD
Matrix: Solid
Analysis Batch: 143335

Client Sample ID: MW-4 (48-50) - Horton
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.50	J B	98.8	96.34		mg/Kg		94	80 - 120	1	20

GC VOA

Analysis Batch: 142495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-97568-1	MW-4 (48-50) - Horton	Total/NA	Solid	8021B	142616
600-97568-2	MW-5 (47-49) - Horton	Total/NA	Solid	8021B	142616
600-97568-3	MW-6 (45-47) - Horton	Total/NA	Solid	8021B	142616
600-97568-4	MW-7 (47-49) - Horton	Total/NA	Solid	8021B	142616
LCS 600-142616/1-A	Lab Control Sample	Total/NA	Solid	8021B	142616
LCSD 600-142616/7-A	Lab Control Sample Dup	Total/NA	Solid	8021B	142616
MB 600-142616/2-A	Method Blank	Total/NA	Solid	8021B	142616

Prep Batch: 142616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-97568-1	MW-4 (48-50) - Horton	Total/NA	Solid	5030B	
600-97568-2	MW-5 (47-49) - Horton	Total/NA	Solid	5030B	
600-97568-3	MW-6 (45-47) - Horton	Total/NA	Solid	5030B	
600-97568-4	MW-7 (47-49) - Horton	Total/NA	Solid	5030B	
LCS 600-142616/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 600-142616/7-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 600-142616/2-A	Method Blank	Total/NA	Solid	5030B	

HPLC/IC

Leach Batch: 143328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-97568-1	MW-4 (48-50) - Horton	Soluble	Solid	DI Leach	
600-97568-1 MS	MW-4 (48-50) - Horton	Soluble	Solid	DI Leach	
600-97568-1 MSD	MW-4 (48-50) - Horton	Soluble	Solid	DI Leach	
600-97568-2	MW-5 (47-49) - Horton	Soluble	Solid	DI Leach	
600-97568-3	MW-6 (45-47) - Horton	Soluble	Solid	DI Leach	
600-97568-4	MW-7 (47-49) - Horton	Soluble	Solid	DI Leach	
LCS 600-143328/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
MB 600-143328/1-A	Method Blank	Soluble	Solid	DI Leach	

Analysis Batch: 143335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-97568-1	MW-4 (48-50) - Horton	Soluble	Solid	9056	143328
600-97568-1 MS	MW-4 (48-50) - Horton	Soluble	Solid	9056	143328
600-97568-1 MSD	MW-4 (48-50) - Horton	Soluble	Solid	9056	143328
600-97568-2	MW-5 (47-49) - Horton	Soluble	Solid	9056	143328
600-97568-3	MW-6 (45-47) - Horton	Soluble	Solid	9056	143328
600-97568-4	MW-7 (47-49) - Horton	Soluble	Solid	9056	143328
LCS 600-143328/2-A	Lab Control Sample	Soluble	Solid	9056	143328
MB 600-143328/1-A	Method Blank	Soluble	Solid	9056	143328

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Kinder-Morgan Horton #1E

TestAmerica Job ID: 600-97568-1

Client Sample ID: MW-4 (48-50) - Horton

Lab Sample ID: 600-97568-1

Date Collected: 08/20/14 08:20

Matrix: Solid

Date Received: 08/25/14 09:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			10 g	10 mL	142616	08/26/14 11:43	MHT	TAL HOU
Total/NA	Analysis	8021B		20	10 g	10 mL	142495	08/26/14 15:28	MHT	TAL HOU
Soluble	Leach	DI Leach			5.06 g	50 mL	143328	09/04/14 15:28	DAW	TAL HOU
Soluble	Analysis	9056		1	5 mL		143335	09/05/14 03:37	DAW	TAL HOU

Client Sample ID: MW-5 (47-49) - Horton

Lab Sample ID: 600-97568-2

Date Collected: 08/20/14 12:45

Matrix: Solid

Date Received: 08/25/14 09:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			10 g	10 mL	142616	08/26/14 11:43	MHT	TAL HOU
Total/NA	Analysis	8021B		20	10 g	10 mL	142495	08/26/14 15:55	MHT	TAL HOU
Soluble	Leach	DI Leach			5.09 g	50 mL	143328	09/04/14 15:28	DAW	TAL HOU
Soluble	Analysis	9056		1	5 mL		143335	09/05/14 04:37	DAW	TAL HOU

Client Sample ID: MW-6 (45-47) - Horton

Lab Sample ID: 600-97568-3

Date Collected: 08/21/14 09:10

Matrix: Solid

Date Received: 08/25/14 09:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			10 g	10 mL	142616	08/26/14 11:43	MHT	TAL HOU
Total/NA	Analysis	8021B		20	10 g	10 mL	142495	08/26/14 16:16	MHT	TAL HOU
Soluble	Leach	DI Leach			5.04 g	50 mL	143328	09/04/14 15:28	DAW	TAL HOU
Soluble	Analysis	9056		1	5 mL		143335	09/05/14 04:57	DAW	TAL HOU

Client Sample ID: MW-7 (47-49) - Horton

Lab Sample ID: 600-97568-4

Date Collected: 08/21/14 13:45

Matrix: Solid

Date Received: 08/25/14 09:57

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			10 g	10 mL	142616	08/26/14 11:43	MHT	TAL HOU
Total/NA	Analysis	8021B		20	10 g	10 mL	142495	08/26/14 16:37	MHT	TAL HOU
Soluble	Leach	DI Leach			5.05 g	50 mL	143328	09/04/14 15:28	DAW	TAL HOU
Soluble	Analysis	9056		1	5 mL		143335	09/05/14 05:17	DAW	TAL HOU

Laboratory References:

Hall Env = Hall Environmental Analysis Laboratory, 4901 Hawkins NE, Suite D, Albuquerque, NM 87109

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Certification Summary

Client: MWH Americas Inc
Project/Site: Kinder-Morgan Horton #1E

TestAmerica Job ID: 600-97568-1

Laboratory: TestAmerica Houston

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0759	08-04-14 *
Louisiana	NELAP	6	30643	06-30-15
Oklahoma	State Program	6	1309	08-31-15 *
Texas	NELAP	6	T104704223	10-31-14
USDA	Federal		P330-14-00192	06-06-17
Utah	NELAP	8	TX00083	10-31-14

* Certification renewal pending - certification considered valid.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 02, 2014

Neal Salcher

Test America
6310 Rothway Street
Houston, TX 77040
TEL: (713) 690-4444
FAX

RE: Kinder-Morgan Horton #1E OrderNo.: 1408E62

Dear Neal Salcher:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/28/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Test America
Project: Kinder-Morgan Horton #1E
Lab Order: 1408E62

Lab ID: 1408E62-001 **Collection Date:** 8/20/2014 8:20:00 AM
Client Sample ID: MW-4 (48-50) - Horton (500-97568-1) **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 418.1: TPH							Analyst: **JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	8/29/2014	15012

Lab ID: 1408E62-002 **Collection Date:** 8/20/2014 12:45:00 PM
Client Sample ID: MW-5 (47-49) - Horton (500-97568-2) **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 418.1: TPH							Analyst: **JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	8/29/2014	15012

Lab ID: 1408E62-003 **Collection Date:** 8/21/2014 9:10:00 AM
Client Sample ID: MW-6 (45-47) - Horton (500-97568-3) **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 418.1: TPH							Analyst: **JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	8/29/2014	15012

Lab ID: 1408E62-004 **Collection Date:** 8/21/2014 1:45:00 PM
Client Sample ID: MW-7 (47-49) - Horton (500-97568-4) **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 418.1: TPH							Analyst: **JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	8/29/2014	15012

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2.
RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1408E62**

02-Sep-14

Client: Test America

Project: Kinder-Morgan Horton #1E

Sample ID	**MB-15012**	SampType:	**MBLK**	TestCode:	**EPA Method 418.1: TPH**					
Client ID:	**PBS**	Batch ID:	**15012**	RunNo:	**20864**					
Prep Date:	**8/28/2014**	Analysis Date:	**8/29/2014**	SeqNo:	**607263**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	**LCS-15012**	SampType:	**LCS**	TestCode:	**EPA Method 418.1: TPH**					
Client ID:	**LCSS**	Batch ID:	**15012**	RunNo:	**20864**					
Prep Date:	**8/28/2014**	Analysis Date:	**8/29/2014**	SeqNo:	**607264**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	115	80	120			

Sample ID	**LCSD-15012**	SampType:	**LCSD**	TestCode:	**EPA Method 418.1: TPH**					
Client ID:	**LCSS02**	Batch ID:	**15012**	RunNo:	**20864**					
Prep Date:	**8/28/2014**	Analysis Date:	**8/29/2014**	SeqNo:	**607265**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	113	80	120	1.30	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TEST AMERICA HOUST Work Order Number: 1408E62 RcptNo: 1

Received by/date: LM 08/28/14

Logged By: Anne Thorne 8/28/2014 9:00:00 AM Anne Thorne

Completed By: Anne Thorne 8/28/2014 Anne Thorne

Reviewed By: 08/28/14

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	FedEx		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Salcher, Neal	Carrier Tracking No(s):	COC No: 600-11166.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: neal.salcher@testamericainc.com		Page: Page 1 of 1
Company: Hall Environmental Analysis Laboratory				Job #: 600-97568-1
Address: 4901 Hawkins NE, Suite D,	Due Date Requested: 9/5/2014			
City: Albuquerque	TAT Requested (days):			
State, Zip: NM, 87109				
Phone:	PO #:			
Email:	WO #:			
Project Name: Kinder-Morgan Horton #1E	Project #: 60005509			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

1.9°c

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (EPA 418.1 TPH - Subcontract to Hall Enviornmental Analysis Laboratory)/ EPA 418.1 TPH	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-4 (48-50) - Horton (600-97568-1)	8/20/14	08:20 Central		Solid			X		1408 E62 -001
MW-5 (47-49) - Horton (600-97568-2)	8/20/14	12:45 Central		Solid			X		-002
MW-6 (45-47) - Horton (600-97568-3)	8/21/14	09:10 Central		Solid			X		-003
MW-7 (47-49) - Horton (600-97568-4)	8/21/14	13:45 Central		Solid			X		-004

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment:	
Relinquished by:	Date/Time: 8/21/14 1400	Company: [illegible]	Received by:	Date/Time: 08/28/14 @ 0900	Company: HEAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

9/11/2014

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of C

600-97568 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

9/11/2014

Client Information	Sampler: Brad Barton	Lab PM:	COC No: 600-29816-10181.4
Client Contact: KMF/El Paso	Phone: 316 305-2789	E-Mail: Cli...@mwhglobal.com	Page: Page 4 of 4
Company: MWH Americas, Inc			Job #:
Address: 11153 Aurora Ave.	Due Date Requested: -		
City: Des Moines, IA	TAT Requested (days): Normal		
State, Zip: Iowa 50322-7904	PO #: WD214204		
Phone: (515) 253-0830	WO#: ARF II ERG-MWH-03-22-14-CWO-01		
Email: client.us.aberbrook-lingenfelter@mwhglobal.com	Project #: 60005509		
Project Name:	SSOW#:		
Site: Horton #1E NM			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - EPA 418.1 TPH	8021B - BTEX Only List	Chloride EPA 300	Total Number of containers	Special Instructions/Note:
			Preservation Code:		N	N	N	N	N		
MW-4 (48-50) - Horton	8/20/14	0820	C	Solid	N	N	1	1	1		2 4oz Jars 1 2oz Jar
MW-5 (47-49) - Horton	8/20/14	1245	C	Solid	N	N	1	1	1		"
MW-6 (45-47) - Horton	8/21/14	0910	C	Solid	N	N	1	1	1		"
MW-7 (47-49) - Horton	8/21/14	1345	C	Solid	N	N	1	1	1		"
				Solid							
				Solid							
				Solid							
				Solid							
				Solid							
				Solid							
				Solid							

Brad Barton 8/22/14

Page 21 of 23

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) I

Special Instructions/QC Requirements: See ARF

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Brad Bart	8/22/14 1445	MWH	Fed Ex	8/22/14 1445	Fed Ex
2	Fed Ex	8/23/14 -	Fed Ex	[illegible]	8/23/14 957	[illegible]
3				[illegible]	8/23/14 957	TA

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Checklist

Loc: 600
97568

Date/Time Received: _____

JOB NUMBER: _____ CLIENT: MWH

UNPACKED BY: _____ CARRIER/DRIVER: FE

Custody Seal Present: ☑ YES ☐ NO Number of Coolers Received. _____

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
B/W	Y / N	Y / N	0.5	100	-0.2	0.3
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N	8/23/14 0U			
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☐ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☑ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2 ☐ YES ☐ NO

pH paper Lot #: _____

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☐ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		

COMMENTS:

8/23/14 pU

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 600-97568-1

Login Number: 97568

List Source: TestAmerica Houston

List Number: 1

Creator: Lockett, DuJuan D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

APPENDIX C

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2673

TestAmerica Job ID: 560-46610-1
Client Project/Site: Horton #1E, 4/2/14 BTEX

For:
MWH Americas Inc
1801 California Street
Suite 2900
Denver, Colorado 80202

Attn: Ms. Sarah Gardner

Authorized for release by:
4/21/2014 3:04:38 PM

Neal Salcher, Senior Project Manager
neal.salcher@testamericainc.com

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 560-46610-1

Laboratory: TestAmerica Corpus Christi

Narrative

Job Narrative
560-46610-1

Comments
No additional comments.

Receipt
The samples were received on 4/8/2014 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 1.8º C.

GC VOA
Method(s) 8021B: LCS and MB are also designated as ICV and ICB for calibration...batch 100781

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: MWH Americas Inc
Project/Site: Horton #1E, 4/2/14 BTEX

TestAmerica Job ID: 560-46610-1

Client Sample ID: MW-1 — Lab Sample ID: 560-46610-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	1.0	J	2.0	0.38	ug/L	1		8021B	Total/NA
Xylenes, Total	1.5	J	2.0	0.65	ug/L	1		8021B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 560-46610-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.6		2.0	0.20	ug/L	1		8021B	Total/NA
Toluene	13		2.0	0.38	ug/L	1		8021B	Total/NA
Xylenes, Total	2.9		2.0	0.65	ug/L	1		8021B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 560-46610-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1

Lab Sample ID: 560-46610-1

Date Collected: 04/02/14 14:50
Matrix: Water
Date Received: 04/08/14 09:45

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.20		2.0	0.20	ug/L			04/15/14 01:44	1
Toluene	**1.0**	**J**	2.0	0.38	ug/L			04/15/14 01:44	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/15/14 01:44	1
Xylenes, Total	**1.5**	**J**	2.0	0.65	ug/L			04/15/14 01:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*58 - 129*		*04/15/14 01:44*	*1*
Trifluorotoluene (Surr)	*96*		*54 - 130*		*04/15/14 01:44*	*1*

Client Sample ID: MW-2

Lab Sample ID: 560-46610-2

Date Collected: 04/02/14 14:45
Matrix: Water
Date Received: 04/08/14 09:45

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4.6**		2.0	0.20	ug/L			04/15/14 02:11	1
Toluene	**13**		2.0	0.38	ug/L			04/15/14 02:11	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/15/14 02:11	1
Xylenes, Total	**2.9**		2.0	0.65	ug/L			04/15/14 02:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*58 - 129*		*04/15/14 02:11*	*1*
Trifluorotoluene (Surr)	*102*		*54 - 130*		*04/15/14 02:11*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-46610-3

Date Collected: 04/02/14 14:55
Matrix: Water
Date Received: 04/08/14 09:45

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.20		2.0	0.20	ug/L			04/15/14 02:39	1
Toluene	<0.38		2.0	0.38	ug/L			04/15/14 02:39	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/15/14 02:39	1
Xylenes, Total	<0.65		2.0	0.65	ug/L			04/15/14 02:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*58 - 129*		*04/15/14 02:39*	*1*
Trifluorotoluene (Surr)	*106*		*54 - 130*		*04/15/14 02:39*	*1*

Client: MWH Americas Inc
Project/Site: Horton #1E, 4/2/14 BTEX

TestAmerica Job ID: 560-46610-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 560-100789/7
Matrix: Water
Analysis Batch: 100789

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.20		2.0	0.20	ug/L			04/14/14 16:55	1
Toluene	<0.38		2.0	0.38	ug/L			04/14/14 16:55	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/14/14 16:55	1
Xylenes, Total	<0.65		2.0	0.65	ug/L			04/14/14 16:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*58 - 129*		*04/14/14 16:55*	*1*
Trifluorotoluene (Surr)	*100*		*54 - 130*		*04/14/14 16:55*	*1*

Lab Sample ID: LCS 560-100789/6
Matrix: Water
Analysis Batch: 100789

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	40.0	38.5		ug/L		96	70 - 130
Toluene	40.0	40.6		ug/L		101	70 - 130
Ethylbenzene	40.0	39.6		ug/L		99	70 - 130
Xylenes, Total	120	114		ug/L		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*58 - 129*
Trifluorotoluene (Surr)	*106*		*54 - 130*

Certification Summary

Client: MWH Americas Inc
Project/Site: Horton #1E, 4/2/14 BTEX

TestAmerica Job ID: 560-46610-1

Laboratory: TestAmerica Corpus Christi

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-14
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210	03-31-15

Method Summary

Client: MWH Americas Inc
Project/Site: Horton #1E, 4/2/14 BTEX

TestAmerica Job ID: 560-46610-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	TAL CC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Sample Summary

Client: MWH Americas Inc
Project/Site: Horton #1E, 4/2/14 BTEX

TestAmerica Job ID: 560-46610-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-46610-1	MW-1	Water	04/02/14 14:50	04/08/14 09:45
560-46610-2	MW-2	Water	04/02/14 14:45	04/08/14 09:45
560-46610-3	MW-3	Water	04/02/14 14:55	04/08/14 09:45

TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone (361) 289-2673 Fax (361) 289-2471

Chain of Custody Record

Client Information	Sampler: Sarah Gardner / Chris Lee	Lab PM: Kellogg, Timothy L.	Carrier Tracking No(s): Fedex 8695 2775 7712	COC No: 560-13131-1157
Client Contact: ~~Mr. Daniel Wade~~ Sarah Gardner	Phone: 303 291 2239	E-Mail: tim.kellogg@testamericainc.com		Page: Page 1 of
Company: MWH Americas Inc				Job #: Loc: 560 46610
Address: 1801 California Street Suite 2900	Due Date Requested:			
City: Denver	TAT Requested (days):			
State, Zip: CO, 80202				
Phone: ~~713 420 3414(Tel)~~ 303 291-2239	PO #: Purchase Order not required			
Email: sarah.gardner@mwhglobal.com ~~Daniel.A.Wade@ds.mwhglobal.com~~	WO #: TWO # C-STLI-			
Project Name: San Juan River Basin Pit Sites	Project #: 56000058			
Site: Horton #1E	SSOW#:			

Analysis Requested

Preservatic
A - HCL
B - NaOH
C - Zn Acetat
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
P - Na2O4S
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
mw-1	4/2/14	1450		Water			X	3	
mw-2	4/2/14	1445		Water			X	3	
mw-3	4/2/14	1455		Water			X	3	
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

560-46610 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sarah Gardner	4/7/14 900	MWH		4/8/14 9:45	TACC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: cbs 1.6°C cor 1.8°C IR#1

4/21/2014

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-46610-1
SDG Number:

Login Number: 46610
List Number: 1
Creator: Rood, Vivian R

List Source: TestAmerica Corpus Christi

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-97667-1
Client Project/Site: KM Horton #1E

For:
MWH Americas Inc
1801 California Street
Suite 2900
Denver, Colorado 80202

Attn: Ms. Sarah Gardner

Authorized for release by:
11/6/2014 12:42:32 PM
Bernard Kirkland, Manager of Project Management
(912)354-7858 e.3238
bernard.kirkland@testamericainc.com

Designee for

Neal Salcher, Senior Project Manager
(713)690-4444
neal.salcher@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 400-97667-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-97667-1

Comments
No additional comments.

Receipt
The samples were received on 10/28/2014 9:39 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0º C.

GC/MS VOA
Method(s) 8260B: Due to the high concentration of ethylbenzene in the parent sample, the matrix spike / matrix spike duplicate (MS/MSD) for batch 234866 exceeded the linear range of the instrument.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: MWH Americas Inc
Project/Site: KM Horton #1E

TestAmerica Job ID: 400-97667-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-97667-1	MW-1	Water	10/23/14 09:20	10/28/14 09:39
400-97667-2	MW-2	Water	10/23/14 09:25	10/28/14 09:39
400-97667-3	MW-3	Water	10/23/14 09:00	10/28/14 09:39
400-97667-4	MW-4	Water	10/23/14 09:10	10/28/14 09:39
400-97667-5	MW-5	Water	10/23/14 09:05	10/28/14 09:39
400-97667-6	MW-6	Water	10/23/14 08:50	10/28/14 09:39
400-97667-7	MW-7	Water	10/23/14 09:15	10/28/14 09:39
400-97667-8	TRIP BLANK	Water	10/23/14 09:30	10/28/14 09:39

Client Sample ID: MW-1

Lab Sample ID: 400-97667-1

Date Collected: 10/23/14 09:20

Matrix: Water

Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 15:20	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 15:20	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 15:20	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*78 - 118*		*10/30/14 15:20*	*1*
Dibromofluoromethane	*109*		*81 - 121*		*10/30/14 15:20*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/30/14 15:20*	*1*

Client Sample ID: MW-2

Lab Sample ID: 400-97667-2

Date Collected: 10/23/14 09:25

Matrix: Water

Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 15:46	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 15:46	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 15:46	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*78 - 118*		*10/30/14 15:46*	*1*
Dibromofluoromethane	*109*		*81 - 121*		*10/30/14 15:46*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*10/30/14 15:46*	*1*

Client Sample ID: MW-3

Lab Sample ID: 400-97667-3

Date Collected: 10/23/14 09:00

Matrix: Water

Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 16:12	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 16:12	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 16:12	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*78 - 118*		*10/30/14 16:12*	*1*
Dibromofluoromethane	*113*		*81 - 121*		*10/30/14 16:12*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*10/30/14 16:12*	*1*

Client Sample ID: MW-4

Lab Sample ID: 400-97667-4

Date Collected: 10/23/14 09:10

Matrix: Water

Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 16:38	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 16:38	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 16:38	1

Client: MWH Americas Inc
Project/Site: KM Horton #1E

TestAmerica Job ID: 400-97667-1

Client Sample ID: MW-4

Lab Sample ID: 400-97667-4

Date Collected: 10/23/14 09:10

Matrix: Water

Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/30/14 16:38*	*1*
Dibromofluoromethane	*110*		*81 - 121*		*10/30/14 16:38*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*10/30/14 16:38*	*1*

Client Sample ID: MW-5

Lab Sample ID: 400-97667-5

Date Collected: 10/23/14 09:05

Matrix: Water

Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 17:04	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 17:04	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 17:04	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*78 - 118*		*10/30/14 17:04*	*1*
Dibromofluoromethane	*106*		*81 - 121*		*10/30/14 17:04*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*10/30/14 17:04*	*1*

Client Sample ID: MW-6

Lab Sample ID: 400-97667-6

Date Collected: 10/23/14 08:50

Matrix: Water

Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 17:30	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 17:30	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 17:30	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/30/14 17:30*	*1*
Dibromofluoromethane	*109*		*81 - 121*		*10/30/14 17:30*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*		*10/30/14 17:30*	*1*

Client Sample ID: MW-7

Lab Sample ID: 400-97667-7

Date Collected: 10/23/14 09:15

Matrix: Water

Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 17:56	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 17:56	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 17:56	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 17:56	1

Client: MWH Americas Inc
Project/Site: KM Horton #1E

TestAmerica Job ID: 400-97667-1

Client Sample ID: MW-7

Lab Sample ID: 400-97667-7

Date Collected: 10/23/14 09:15

Matrix: Water

Date Received: 10/28/14 09:39

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/30/14 17:56*	*1*
Dibromofluoromethane	*107*		*81 - 121*		*10/30/14 17:56*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*10/30/14 17:56*	*1*

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-97667-8

Date Collected: 10/23/14 09:30

Matrix: Water

Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 18:22	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 18:22	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 18:22	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 18:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*78 - 118*		*10/30/14 18:22*	*1*
Dibromofluoromethane	*113*		*81 - 121*		*10/30/14 18:22*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*10/30/14 18:22*	*1*

Client: MWH Americas Inc
Project/Site: KM Horton #1E

TestAmerica Job ID: 400-97667-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-234866/4
Matrix: Water
Analysis Batch: 234866

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 10:50	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 10:50	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 10:50	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 10:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*78 - 118*		*10/30/14 10:50*	*1*
Dibromofluoromethane	*111*		*81 - 121*		*10/30/14 10:50*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*10/30/14 10:50*	*1*

Lab Sample ID: LCS 400-234866/1002
Matrix: Water
Analysis Batch: 234866

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	45.8		ug/L		92	79 - 120
Ethylbenzene	50.0	45.8		ug/L		92	80 - 120
Toluene	50.0	44.4		ug/L		89	80 - 120
Xylenes, Total	100	88.0		ug/L		88	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*78 - 118*
Dibromofluoromethane	*104*		*81 - 121*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: KM Horton #1E

TestAmerica Job ID: 400-97667-1

Client Sample ID: MW-1 — Lab Sample ID: 400-97667-1

Date Collected: 10/23/14 09:20 — **Matrix: Water**
Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234866	10/30/14 15:20	ARM	TAL PEN

Client Sample ID: MW-2 — Lab Sample ID: 400-97667-2

Date Collected: 10/23/14 09:25 — **Matrix: Water**
Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234866	10/30/14 15:46	ARM	TAL PEN

Client Sample ID: MW-3 — Lab Sample ID: 400-97667-3

Date Collected: 10/23/14 09:00 — **Matrix: Water**
Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234866	10/30/14 16:12	ARM	TAL PEN

Client Sample ID: MW-4 — Lab Sample ID: 400-97667-4

Date Collected: 10/23/14 09:10 — **Matrix: Water**
Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234866	10/30/14 16:38	ARM	TAL PEN

Client Sample ID: MW-5 — Lab Sample ID: 400-97667-5

Date Collected: 10/23/14 09:05 — **Matrix: Water**
Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234866	10/30/14 17:04	ARM	TAL PEN

Client Sample ID: MW-6 — Lab Sample ID: 400-97667-6

Date Collected: 10/23/14 08:50 — **Matrix: Water**
Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234866	10/30/14 17:30	ARM	TAL PEN

Lab Chronicle

Client: MWH Americas Inc
Project/Site: KM Horton #1E

TestAmerica Job ID: 400-97667-1

Client Sample ID: MW-7

Lab Sample ID: 400-97667-7

Date Collected: 10/23/14 09:15

Matrix: Water

Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234866	10/30/14 17:56	ARM	TAL PEN

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-97667-8

Date Collected: 10/23/14 09:30

Matrix: Water

Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234866	10/30/14 18:22	ARM	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Method Summary

Client: MWH Americas Inc
Project/Site: KM Horton #1E

TestAmerica Job ID: 400-97667-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone (361) 289-2673 Fax (361) 289-2471

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Chris Lee, Sarah Gardner	Lab PM: Salcher, Neal	Carrier Tracking No(s):	COC No: 560-15214-1510.1
Client Contact: Ms. Sarah Gardner	Phone: 303 291-2242	E-Mail: neal.salcher@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc				Job #:
Address: 1801 California Street Suite 2900	Due Date Requested:			
City: Denver	TAT Requested (days):			
State, Zip: CO, 80202				
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested			
Email: sarah.gardner@mwhglobal.com	WO #: As per Enfos			
Project Name: KM Horton #1E	Project #: 56004966			
Site:	SSOW#:			

Analysis Requested

400-97667 COC

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
MW-1	10/23/14	920	G	Water			X		
MW-2	10/23/14	925	G	Water			X		
MW-3	10/23/14	900	G	Water			X		
MW-4	10/23/14	910	G	Water			X		
MW-5	10/23/14	905	G	Water			X		
MW-6	10/23/14	850	G	Water			X		
MW-7	10/23/14	915	G	Water			X		
TRIP BLANK	10/23/14	930	G	Water			X		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Chris Lee	10/27/14 915			10-28-14 939	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.0°C IR-2